**GROWING BIGGER**

The following pattern was built with popsicle sticks.

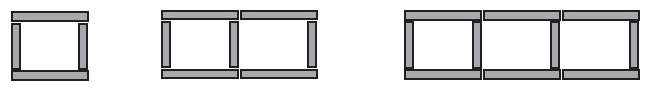


Figure 1

Figure 2

Figure 3

Predict how many popsicle sticks will be needed to create Figure 15

Explain your reasoning for your prediction

Create a table to organize the data for the figure number and the number of popsicle sticks needed to create each figure.

Extend the pattern to check your prediction for the number of popsicle sticks needed to create Figure 15. Were you correct in your original prediction? If not, figure out why your prediction was incorrect and explain the reasoning of the correct pattern.

Build these first three figures using chip counters.

Figure 1

Figure 3

Figure 2

How many counters did you use for each triangle?

What happens between the second and the third triangles?

Describe any patterns you notice in the triangles

How many counters would it take to make the sixth triangle? How do you know?

Describe how you can find the number of counters in the tenth triangle.